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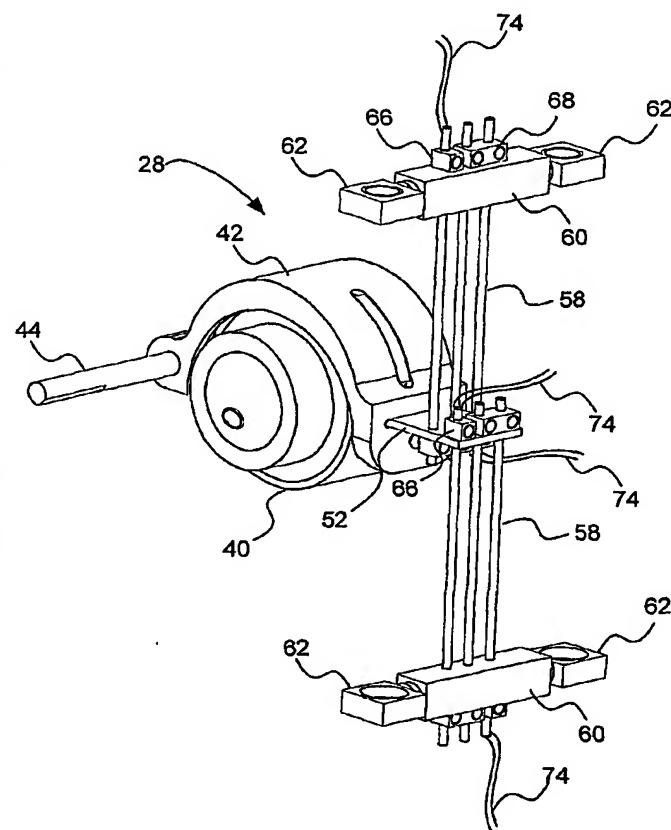
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(54) Title: HIGH POWER/WEIGHT RATIO BRAKING DEVICE BASED ON SHAPE MEMORY MATERIAL TECHNOLOGY



(57) Abstract: The braking device is provided a set of shape memory alloy activators positioned, in an agonistic-antagonistic configuration on each side of a brake lever. Braking and releasing phases are dictated by the austenitic transformation of the shape memory alloy activators. During brake activation, shrinking of the braking activator brings the friction pad in contact with a rotating drum creating a braking friction torque. Once the brake has been activated, deformation of a flexible fiberglass component prevents brake releasing by applying sufficient normal force between the drum and the friction pad. Conversely, upon heating of the releasing activator, the pad loses its grip and the drum is free to rotate.



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